SELF-CONCEPT AND PARENTAL EVALUATION OF PEER RELATIONSHIPS IN CLEFT LIP AND PALATE CHILDREN

by

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INTRODUCTION

An individual's appearance is an important personal characteristic which helps to determine how that individual interacts with society and, in turn, how society perceives and accepts him. Facial aesthetics, as a specific component of body image, is especially important in the development of an individual's self-concept. The child who is born with a serious congenital anomaly or has sustained an injury during infancy or childhood may find adaptation to his environment difficult.[1-4] A striking example of such a developmental anomaly is the child born with an extensive cleft of the lip and palate. The psychological sequelae of this disfigurement may have as great an impact on the individual as the strictly physical aspects of the defect.[5]

The purpose of this study was to compare the self-concepts of 50 children and young adolescents with extensive cleft lip and palate, excluding isolated cleft palate, with the self-concepts of an equal number of non-cleft individuals when matched by age, sex, and race. To accomplish this, the Piers-Harris children's self-concept scale was administered to each cleft lip and palate and control individual. This scale is designed primarily to assess the development of children's self-attitudes and correlates of these attitudes. A questionnaire was also completed by the parents of both cleft and control groups evaluating their children's relationships with family and peers, and their progress in school.

REVIEW OF THE LITERATURE

Research dealing with physical attractiveness in late adolescence and early adulthood has focused primarily on the relationship between physical attractiveness, personality characteristics, and social behavior. An individual's appearance is the personal characteristic most obvious and accessible to others in social interaction. Macgregor[6] emphasized that simply looking at one another in a life situation is a basic form of communication.

Miller[7] evaluated the role of physical attractiveness in the forming of impressions. A total of 360 female and 360 male undergraduate college students were given photographs that had been previously scaled as high, moderate, or low in physical attractiveness and were requested to record their impressions of the stimulus person on an adjective checklist. Unattractiveness was associated with negative traits, high attractiveness was associated with positive traits, and the status of moderately attractive individuals was variable, generally falling between high- and low-attractive stimuli. These data correlate well with the hypothesis that in a first impression situation, a person's level of attractiveness may evoke in a perceiver a consistent set of expectancies by a process of trait inference.

Dion et al.[8] examined the belief that physically attractive individuals possess socially desirable personality traits and lead better lives than their unattractive peers. Thirty male and 30 female undergraduate college students evaluated pictures which had been previously determined as representing high physical attractiveness, average attractiveness, and

relative unattractiveness. Their results suggest that highly attractive individuals were judged to be more socially desirable than those of lesser attractiveness. It was also hypothesized that the attractive stimulus persons are likely to secure more prestigious jobs, experience happier marriages, and enjoy more fulfilling professional and social lives than unattractive individuals. These results further suggest that a physical attractiveness stereotype does exist.

Adams[9] investigated the relationship between physical attractiveness and high self-concept. Eighty-one male and 100 female undergraduate college students responded to several personality measures previously reported as characteristics assigned to physical attractiveness. Peer ratings and self-preconceptions of facial attractiveness, body form, and general appearance were gathered. The data support the relationship between physical attractiveness, personality characteristics, and social behavior. Adams concluded that the physical attractiveness of an individual may lead to the internalization of a positive self-concept which attenuates peer pressure influences. Similar relationships between physical attractiveness and high self-concept have been reported by Lerner and Brackney,[10] Lerner and Karabenick,[11] and Lerner et al.[12,13]

Although the previous research supports the "beauty implies goodness" hypothesis[8] that physically attractive individuals are felt to possess more socially desirable characteristics than unattractive individuals, not all investigators agree. Shea[14] believed that most previous investigations had measured personality in relation to varying aspects of social evaluation and questioned whether personality assessment methods that were less closely associated with social interaction would be equally

susceptible to influence by attractiveness. Therefore, rather than using social evaluative measures, her study utilized personality measures assessing ego development and its relationship to the individual's degree of physical attractiveness. A total of 294 male and female college students were interviewed in private. Each student was interviewed by two investigators: one who assessed facial attractiveness alone, disregarding body shape, and one who assessed body shape alone, disregarding facial attractiveness. Three assessments of ego development were completed during the interview period. Analyses of variance on the three measures of ego development were nonsignificant. This supported Shea's belief that contrary to the physical attractiveness stereotype, attractive and unattractive individuals do not vary in their personality traits. She concluded that, although previous studies using social evaluative measures supported a relationship between positive personality characteristics and physically attractive individuals, attractive persons may be thought to have certain personality characteristics, such as positive ego development, that in actuality they do not possess.

In an effort to define personality development, Maddi[15] theorized that personality consists of core and peripheral characteristics. Core characteristics include concepts of good, bad, right, and wrong which give organizational direction to behavior. Ego mechanisms, which Maddi describes as core characteristics, are likely to be altered only by extreme influences. Peripheral characteristics, which include the social evaluative trait of physical attractiveness, are believed to have environmental impact on personality development and thus are relatively easily altered.

Facially attractive individuals are felt to possess more socially desirable personality traits and evoke greater expectations about personality and behavior than their less attractive counterparts.[16,17] However, research to date has focused on evaluations by adolescents and adults of other adolescents and adults who vary in facial attractiveness. Less is known with regard to the age at which younger children begin to differentiate between facial appearances and possibly accept stereotyping based on the degree of facial attractiveness.

In an effort to determine whether children discriminate between facial appearances, Cross and Cross[18] interviewed 300 subjects, 80 from each of three age levels (7, 12, and 17 years) and 60 adults between the ages of 30 and 50. These subjects rated, on a seven-point scale, the perceived facial attractiveness of 72 stimulus faces. Judges from the four different age groups did not differ significantly in their ratings of facial attractiveness. This suggests that some consensus may exist across age groups on the ratings of facial attractiveness.

Dion and Bersheild[19] examined the impact of peer perceptions of physical attractiveness on young children in a setting where subjects were personally acquainted. Seventy-seven nursery school children, 38 females and 39 males between four and six years of age, were shown a large board containing photographs of all of their classmates. Each picture had been previously rated by 14 adult judges (7 male and 7 female), who were unacquainted with the children as to their physical attractiveness. In this investigation, physical attractiveness included both facial characteristics and general body build. Results demonstrated that unattractive children were less popular than attractive children.

Unattractive children, particularly males, were more frequently nominated as exhibiting antisocial behaviors than were attractive children. This suggests that young children's physical attractiveness is related both to popularity in their peer groups and to their peers' perception of their social behavior. The relevance of physical attractiveness as a social cue, therefore, is not limited to adults; there are indications that it begins to function as a significant personal characteristic early in life.

Dion[20] conducted a study to determine whether young children exhibit stereotyping based on facial attractiveness in children not personally known to them. Sixty-one preschool and kindergarten children, 30 males and 31 females aged three to six and a half years, were shown facial photographs of peers who had previously been judged by eight adults as being attractive or unattractive. Twelve photographs were shown: three attractive girls, three unattractive girls, three attractive boys, and three unattractive boys. The children showed a significant preference for attractive children as potential friends and a corresponding dislike of unattractive children. Dion concluded that attractive children were more likely to behave in socially acceptable ways, while unattractive children were perceived as more likely to exhibit antisocial behaviors. This study further implied that facial attractiveness is a discernible social cue which has already begun to acquire evaluation connotations at this early age.

Social and Psychological Effects of Cleft Lip and Palate

The emphasis on physical appearance and the intolerance for difference in our society lead to the expectation that a facial disfigurement can

affect personality. The term "facial disfigurement" signifies a deviation from the normal physiognomic form that is sufficiently negatively marked as to set that individual apart from the general population.[21] A striking example of such a disfigurement is the individual born with a cleft lip and palate.

Marinelli[22] stressed that interactions with the facially disfigured have been shown to increase the anxiety of the non-disabled person. Not to notice facial disfigurement was especially difficult. Goffman[23] stated:

> The closer the defect is to the communication equipment upon which the listener must focus his attention, the smaller the defect needs to be to throw the listener off balance. These defects tend to shut off the afflicted individual from the stream of daily contacts, transforming him into a faulty interactant, either in his eyes or in the eyes of others.

The role of the face in our interaction with others, especially with our emphasis on external appearance, physical attractiveness, and conformity, places many of the problems associated with cleft lip and palate in the area of mental health.[24] Many problems encountered by the individual with cleft lip and palate are related to the unique nature of their handicap. The disability does not impede normal functioning, but negative social attitudes may have sociological and psychological implications. Research in this area often reflected the authors' personal attitudes and clinical observations of the emotional effects of cleft lip and palate. Many conclusions were reached without the aid of adequate statistical analysis and documentation. These studies often reflected the desire to find a personality unique to the cleft lip and palate individual. One can question the degree of difficulty that cleft individuals with obvious facial disfigurement experience in the development of self-concept when compared to non-cleft peers.

When Billig[25] evaluated personality adjustment in 60 cleft patients up to 17 years of age, only 5% were judged as having unsatisfactory personality adjustment. Fifty-eight percent of the patients had normal or higher adjustment, with 42% exhibiting below normal adjustment. It was also emphasized that the 5% with unsatisfactory adjustment all exhibited severe scarring and a noticeable speech defect. Sidney and Matthews[26] tested the hypothesis that there were no significant differences in social adjustment between children born with cleft palate and other children. Twenty-one children with cleft palate were matched on the basis of sex, age, color and class grade with 21 non-cleft children. Social adjustment was measured by means of five testing instruments. The results showed that in general, whatever differences did occur between the experimental and control group were not consistent. The authors concluded that their data did not support the assumption that the social adjustment of cleft palate children is markedly inferior to that of other children.

Watson[27] conducted a study to determine whether boys with clefts of both lip and palate would display more personality maladjustment than boys without clefts. The Rogers Personal Adjustment Inventory was administered to 93 boys between the ages of eight and 14. The subjects were divided into three groups: 19 boys with chronic physical handicaps which did not involve speech or cosmetic appearance; a cleft lip and palate group of 34 boys; and a control group of physically normal boys. The Rogers Inventory consists of 43 items concerning the individual's wishes, self-evaluations, likes, dislikes, and fantasies. No significant differences in personal adjustment were reported on the basis of the scores obtained.

Goodstein,[28] in evaluating Watson's[27] work, suggested that the study be extended to include girls, for whom the effects of the cleft may be more serious.

The above studies, along with those of Palmer and Adams,[29] Corah and Corah,[30] Ruess,[31] and Wirls and Plotkin,[32] using structured personality tests and objectively scored projected techniques, support the contention that children with cleft lip and/or palate do not display significant emotional maladjustment.

Although previous research has attempted to identify those personality characteristics unique to cleft lip and palate individuals, results have been inconclusive. Most studies support the belief that cleft individuals do not display more emotional maladjustment than non-cleft individuals. Clifford et al.[36] evaluated 98 cleft lip-palate adult patients who had been surgically corrected between 22 to 27 years earlier. The mean level of accomplishment and self-satisfaction was high. Ninety-five percent were very satisfied, satisfied, or somewhat satisfied with their appearance. The authors stressed that such high self-reports could have been affected by the passage of time, which lessens the recall of any painful experiences. By recognizing and effectively dealing with those areas of conflict which cleft lip and palate individuals experience during childhood and adolescence, the negative effects of the anomaly can hopefully be minimized. Positive self-concept, an integral component of improving interpersonal contact, is based on an individual's perception of the way others are responding to him.[37]

Kapp[38] compared the self-concepts of children with cleft lip and/or palate and non-cleft children. Thirty-four cleft lip and/or palate

children (nine of whom had isolated cleft palate) were individually matched with 34 non-cleft school children. Each child was given the Piers-Harris Children's Self-Concept Scale. No significant differences were found in self-concept scores between the cleft and non-cleft groups. Kapp also reported that children, regardless of sex, reported a significantly greater dissatisfaction with physical appearance. A significant interaction effect between sex and presence or absence of cleft was found, with cleft girls reporting greater unhappiness and dissatisfaction, less success in school, and more anxiety than non-cleft peers.

Clifford,[35,40] using two separate measures, evaluated the self-concepts of 39 cleft lip and palate children (26 cleft lip and palate, 10 cleft palate only, 3 cleft lip only) and 68 asthmatics. Differences between the cleft palate only and the cleft lip and/or palate subgroups on the two self-concept measures were insignificant. Nor were there differences between the total lip-palate group and asthmatics. The tendency was for all of the cleft children to rate themselves in a positive, self-accepting manner. Sinko[41] obtained the self-concept score, using the Tennessee Self-Concept Scale, of 20 speakers with clefts of the lip and/or palate. The results demonstrated that the cleft individuals scored within the range of normalcy. However, their scores were characterized by denial and defensiveness.

Richman[42] compared mothers', fathers', and teachers' perceptions of behavior of 136 cleft lip and/or palate children between the ages of seven and 12. The comparisons were made on the behavioral dimensions of inhibition and acting out. The results indicated that teachers view cleft males and females as significantly more inhibited in the classroom than the parents observed at home.

Tiza et al.,[43] in interviewing the parents of cleft lip and palate children, reported that all parents tended to minimize their child's speech problems and maximize their estimates of his intelligence. They concluded that the majority of mothers experienced difficulty in accepting the deformity and were unaware of the child's sensitivity and emotional conflicts. The authors also believed that children with cleft palate characteristically show higher levels of postural tension, muscular rigidity, motor activity and self-sufficiency than normal children.

Grown[44] and Johnson[45] stated that children with clefts often have a sense of inadequacy, combined with the rejection of teachers, peers and other parents, which renders the child socially maladjusted. Spriesterbach's[46] comprehensive investigation of psychological influences of cleft palate supports the picture of the cleft child as less confident, less aggressive, and less independent than non-cleft peers.

Schweckendiek and Danzer[42] used questionnaires to evaluate 200 students with clefts and ranging in age from seven to 14 years, as to their behavior at home and in school. Only 20% of all children with clefts showed behavior disorders or poor social adaptation to school or family. The remaining 80% of cleft children held a positive relation to the environment, which corresponded to the normal mean. The 5% of children demonstrating the most negative behavior possessed the most severe facial disfigurement.

METHODS AND MATERIALS

The subjects were 100 male and female children between the ages of eight and 18 who were regular dental patients of the James Whitcomb Riley Hospital for Children, Indianapolis, Indiana. All children attended regular school classes. The cleft group contained 50 children, 33 males and 17 females. All children in this group had either a repaired unilateral or bilateral complete cleft of the lip and palate. Facial scarring was evident in each cleft child. Children with isolated cleft palate were excluded from the study because of their lack of facial disfigurement. All cleft children were regular patients in the Oral-Facial Clinic at Riley Children's Hospital.

The non-cleft group included 50 children, 33 males and 17 females. The children in both groups were known to the examiner, which facilitated the matching of subjects. Each cleft child was individually matched with a non-cleft child on the basis of age, sex, and race (Table I).

Self-Concept Testing Instrument

The instrument used to evaluate self-concept was the Piers-Harris Children's Self-Concept Scale.[48] The scale contains 80 declarative sentences to which the child responds "yes" or "no", and is concerned primarily with the development of children's self-attitudes and correlates of these attitudes (Table II). The scale provides a global score for self-concept as well as six cluster scores designed as factors. The cluster scores provide insight into the individual's behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity,

happiness, and satisfaction. For all cluster scores, as well as the global score, the higher the score, the more positive is the attribute. The author individually administered the scale to each cleft and non-cleft child.

The Piers-Harris Children's Self-Concept Scale was chosen for children at this age level, because it provides a global score and cluster scores which have been derived through factor analysis. The scale's designers report split-half reliability coefficients of .90 and .87 and a test-retest reliability coefficient of .77.[49] These correlations indicate good internal consistency and adequate temporal stability. According to Wylie,[50] the test's reliability and validity have proven sufficient for research purposes.

Parental Questionnaire

A questionnaire was developed for the parents of the cleft and non-cleft children to determine how they viewed their child's relationships with family and peers, and progress in school (Table III). The parents were requested to complete the questionnaire while their child was being administered the self-concept scale. Before the administration of any testing materials, a cover letter was provided explaining the scope of the investigation, and informed consent was obtained (Table IV).

RESULTS

I. Piers-Harris Children's Self-Concept Scale

Table V gives the mean and standard deviations for the global and cluster scores of cleft and non-cleft subjects. The statistical evaluation utilized in each of the seven analyses was multifactor analysis of variance with repeated measures.[51]

Cleft subjects reported significantly lower global self-concept than non-cleft subjects ($p < .005$). Further significant differences between cleft and non-cleft subjects were found in five of the six cluster scores. These include: behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happiness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). Additionally, a significant effect ($p < .01$) was found on the popularity score, with cleft males feeling less popular than their non-cleft peers.

A significant effect relating to sex was found on the anxiety score, with cleft females reporting significantly more anxiety ($p < .01$) than their non-cleft female peers. Tables VI through XII present the results of the statistical analysis demonstrating significance. Figures 1 through 7 plot the interaction effect between sex and presence or absence of cleft on the global self-concept score as well as the six cluster scores.

II. Parents' Questionnaire

A sign test[52] was utilized to ascertain significant differences between the parents of cleft and non-cleft subjects, establishing their child's relationship with family and peers, and progress in school. Of

the six statements to which responses were requested, only two demonstrated significant differences, with the parents of cleft subjects reporting more negative responses. The statements were: "My child has seldom been the subject of teasing by other children because of his/her facial appearance" ($p < .05$) and "My child's progress in school has not been affected by his/her facial appearance" ($p < .05$). Figures 8 through 13 provide graphic representation of these differences.

TABLES AND FIGURES

TABLE I

Identifying data of
cleft and non-cleft groups

	Cleft Group	Non-Cleft Group
Number of Children	50	50
Sex: Male	33	33
Female	17	17
Average Age (years)	11.7	11.7
Race* - Caucasian	50	50

*No races were excluded from the study. Only Caucasian patients presented for the evaluation.

THE PIERS - HARRIS

CHILDREN'S SELF CONCEPT SCALE

(The Way I Feel About Myself)

by

ELLEN V. PIERS, Ph.D.

and

DALE B. HARRIS, Ph.D.

Published by

Counselor Recordings and Tests

P BOX 6184 ACKLEN STATION NASHVILLE, TENNESSEE 37212

THE WAY I FEEL ABOUT MYSELF

NAME .....

AGE ..... GIRL OR BOY.....

GRADE ..... SCHOOL.....

DATE .....

Here are a set of statements. Some of them are true of you and so you will circle the *yes.* Some are not true of you and so you will circle the *no.* Answer *every* question even if some are hard to decide, but do *not* circle both *yes* and *no.* Remember, circle the *yes* if the statement is generally like you, or circle the *no* if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My classmates make fun of me..... yes no
2. I am a happy person..... yes no
3. It is hard for me to make friends..... yes no
4. I am often sad..... yes no
5. I am smart..... yes no
6. I am shy..... yes no
7. I get nervous when the teacher calls on me ..... yes no
8. My looks bother me ..... yes no
9. When I grow up, I will be an important person ..... yes no
10. I get worried when we have tests in school..... yes no
11. I am unpopular..... yes no
12. I am well behaved in school..... yes no
13. It is usually my fault when something goes wrong ..... yes no
14. I cause trouble to my family..... yes no
15. I am strong ..... yes no
16. I have good ideas ..... yes no
17. I am an important member of my family ..... yes no
18. I usually want my own way..... yes no
19. I am good at making things with my hands ..... yes no
20. I give up easily..... yes no

21. I am good in my school work ..... yes no
22. I do many bad things ..... yes no
23. I can draw well ..... yes no
24. I am good in music ..... yes no
25. I behave badly at home ..... yes no
26. I am slow in finishing my school work..... yes no
27. I am an important member of my class ..... yes no
28. I am nervous..... yes no
29. I have pretty eyes ..... yes no
30. I can give a good report in front of the class ..... yes no
31. In school I am a dreamer..... yes no
32. I pick on my brother(s) and sister(s) ..... yes no
33. My friends like my ideas..... yes no
34. I often get into trouble..... yes no
35. I am obedient at home..... yes no
36. I am lucky ..... yes no
37. I worry a lot..... yes no
38. My parents expect too much of me ..... yes no
39. I like being the way I am ..... yes no
40. I feel left out of things ..... yes no

41. I have nice hair..... yes no
42. I often volunteer in school ..... yes no
43. I wish I were different ..... yes no
44. I sleep well at night..... yes no
45. I hate school..... yes no
46. I am among the last to be chosen for games..... yes no
47. I am sick a lot ..... yes no
48. I am often mean to other people..... yes no
49. My classmates in school think I have good ideas ..... yes no
50. I am unhappy ..... yes no
51. I have many friends ..... yes no
52. I am cheerful ..... yes no
53. I am dumb about most things ..... yes no
54. I am good looking ..... yes no
55. I have lots of pep..... yes no
56. I get into a lot of fights..... yes no
57. I am popular with boys..... yes no
58. People pick on me ..... yes no
59. My family is disappointed in me..... yes no
60. I have a pleasant face ..... yes no

61. When I try to make something, everything seems to go wrong. yes no
62. I am picked on at home ..... yes no
63. I am a leader in games and sports ..... yes no
64. I am clumsy ..... yes no
65. In games and sports, I watch instead of play ..... yes no
66. I forget what I learn ..... yes no
67. I am easy to get along with ..... yes no
68. I lose my temper easily ..... yes no
69. I am popular with girls ..... yes no
70. I am a good reader ..... yes no
71. I would rather work alone than with a group ..... yes no
72. I like my brother (sister) ..... yes no
73. I have a good figure ..... yes no
74. I am often afraid ..... yes no
75. I am always dropping or breaking things ..... yes no
76. I can be trusted ..... yes no
77. I am different from other people ..... yes no
78. I think bad thoughts ..... yes no
79. I cry easily ..... yes no
80. I am a good person ..... yes no

TABLE III

Parent's questionnaire evaluating their children's relationships with family and peers, and their progress in school

1. My child has had an essentially normal family life.

STRONGLY AGREE	5	
AGREE	4	Please Circle Only One Choice
UNDECIDED	3	
DISAGREE	2	
STRONGLY DISAGREE	1	

2. My child has a good feeling about himself/herself.

5 4 3 2 1

3. My child gets along well with other children his/her age.

5 4 3 2 1

4. My child would rather play with other children than at home.

5 4 3 2 1

5. My child has seldom been the subject of teasing by other children because of his/her facial appearance.

5 4 3 2 1

6. My child's progress in school has not been affected by his/her facial appearance.

5 4 3 2 1

TABLE IV

INDIANA UNIVERSITY SCHOOL OF DENTISTRY

1121 WEST MICHIGAN STREET • INDIANAPOLIS, INDIANA 46202

CONSENT LETTER

DEPARTMENT OF PEDODONTICS

AREA CODE 317
TELEPHONE 264-8111

Dear Parent:

Children born with a cleft lip/cleft palate often have many medical and dental problems which demand treatment early in life. This treatment concentrates mainly on the surgical correction of the defect. Little is done, in many cases, to provide the child with psychological guidance during the early years of growth and development. Therefore, we are asking you and your child to participate in a research program designed to provide information which will help dentists to better understand the psychological as well as the dental needs of the cleft lip/cleft palate children. This will aid the dentist in providing the best care possible.

The procedures in this study are easily accomplished and at no cost to you. We will ask your child to fill out the Piers-Harris children's self-concept scale, a standard psychological testing aid which determines the way your child feels about him/herself. We will ask you to fill out a brief questionnaire which will take approximately fifteen minutes to complete. All information obtained will be held in strictest confidence. We ask that the parent not help the child complete the scale in any way. During the course of these procedures, we may wish to take photographs of your child for educational or scientific publication purposes and would appreciate your consent to do so.

Your authorization for you and your child's participation in this project is entirely voluntary. Please feel free to ask any questions about our program, and we thank you for your assistance and participation in this research project.

Sincerely yours,

James E. Jones, D.M.D., M.S.
Resident, Department of Pedodontics
James Whitcomb Riley Hospital for Children
Indianapolis, Indiana 46223

I grant permission for myself and my child, _____
to participate in the research project entitled, "Self Concept and Parental Evaluation of Peer Relationships in Cleft Lip and Palate Children." I understand that my name or my child's name will not be used in any analysis of the results or in the identification of any photographs in this project. I further understand that participation in this project is voluntary and we may withdraw from the study at any time without jeopardizing the quality of treatment which may be planned for my child.

_____ _____
Date Parent's Signature (Legal Guardian)

_____ _____
Witnessed by: Child's Signature

_____
Information Obtained by:

TABLE V

Means and standard deviations of self-concept and cluster scores*

Variable	Cleft Group		Control Group	
	Mean	(S.D.)	Mean	(S.D.)
Self-Concept:				
Males	55.82	10.73	60.00	9.61
Females	50.88	13.11	59.59	14.37
Total	54.14	11.69	59.86	11.30
Behavior:				
Males	11.91	2.28	12.87	2.91
Females	12.17	3.12	13.06	2.98
Total	12.00	2.57	12.94	2.91
School Status:				
Males	12.03	3.61	12.97	2.91
Females	10.65	3.61	13.06	4.22
Total	11.56	3.63	13.00	3.36
Anxiety:				
Males	8.48	2.87	8.33	2.97
Females	6.88	2.57	8.88	3.02
Total	7.94	2.85	8.52	2.97
Popularity:				
Males	9.33	3.07	11.36	2.68
Females	8.24	3.11	8.71	2.80
Total	8.96	3.09	10.46	2.98
Happiness & Satisfaction:				
Males	6.69	2.23	7.49	2.14
Females	5.88	2.80	8.12	1.73
Total	6.42	2.44	7.70	2.01
Physical Attributes & Appearance:				
Males	7.42	2.07	8.69	1.36
Females	7.00	2.15	8.82	1.87
Total	7.28	2.09	8.74	1.53

*Higher scores indicate a more positive rating.

TABLE VI

Analysis of variance for global self-concept

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	160.4	0.99	
Between Pairs Within Sex	48	162.4		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	931.8	9.13	$<.005$
Group x Sex Interaction	1	114.8	1.13	
Group x Pair Within Sex	48	102.0		
Total DF	99			

TABLE VII

Analysis of variance for behavior

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	1.12	0.11	
Between Pairs Within Sex	48	10.71		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	19.24	4.13	$<.05$
Group x Sex Interaction	1	0.04	0.01	
Group x Pair Within Sex	48	4.65		
Total DF	99			

TABLE VIII

Analysis of variance
for school status

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	9.40	0.76	
Between Pairs Within Sex	48	12.37		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	63.00	5.15	$<.05$
Group x Sex Interaction	1	12.16	0.99	
Group x Pair Within Sex	48	12.23		
Total DF	99			

TABLE IX

Analysis of variance
for popularity

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	79.13	8.05	$<.01$
Between Pairs Within Sex	48	9.83		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	35.09	4.96	$<.05$
Group x Sex Interaction	1	13.65	1.93	
Group x Pair Within Sex	48	7.08		
Total DF	99			

TABLE X

Analysis of variance for happiness and satisfaction

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	0.19	0.03	
Between Pairs Within Sex	48	6.43		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	51.27	14.45	<.001
Group x Sex Interaction	1	11.75	3.31	
Group x Pair Within Sex	48	3.55		
Total DF	99			

TABLE XI

Analysis of variance for physical attributes and appearance

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	0.05	0.15	
Between Pairs Within Sex	48	3.31		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	53.78	15.32	<.001
Group x Sex Interaction	1	1.70	0.48	
Group x Pair Within Sex	48	3.51		
Total DF	99			

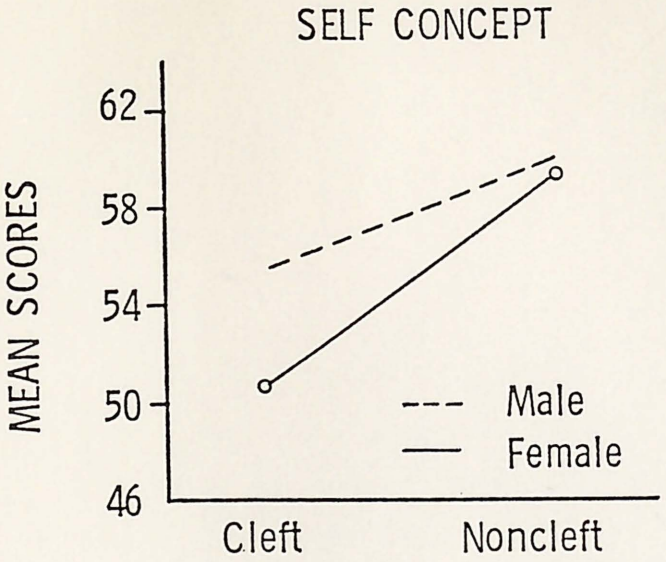
TABLE XII

Analysis of variance for anxiety

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs Female	1	6.23	0.70	
Between Pairs Within Sex	48	8.87		
Within Pairs:	(50)			
Cleft vs Non-Cleft Group	1	19.17	2.47	
Group x Sex Interaction	1	25.97	3.34	.01
Group x Pair Within Sex	48	7.77		
Total DF	99			

FIGURE 1. Graph showing the interaction effect between sex and presence or absence of cleft on the global self-concept score.

FIGURE 2. Graph showing the interaction effect between sex and presence or absence of cleft on the behavior score.


SELF CONCEPT
MEAN SCORES
62
58
54
50
46
Male
Female
Cleft
Noncleft

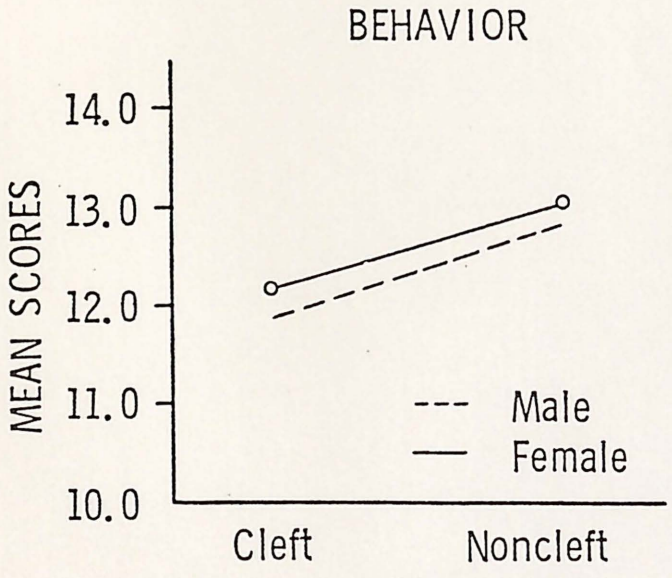
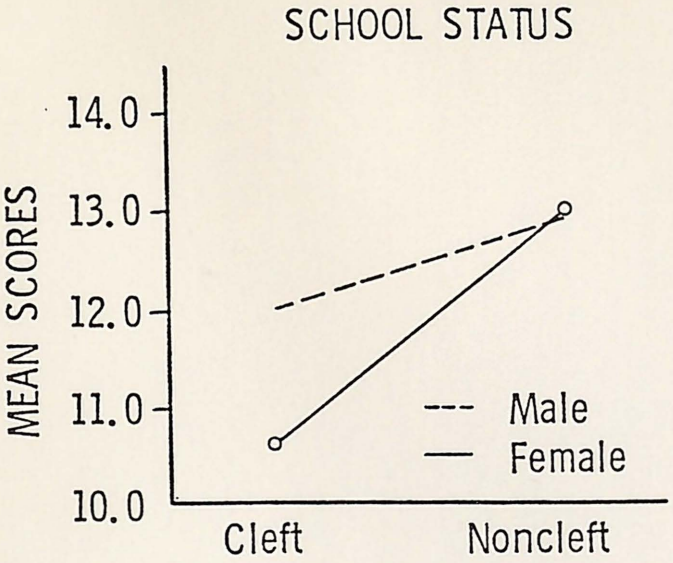

BEHAVIOR
MEAN SCORES
14.0
13.0
12.0
11.0
10.0
Male
Female
Cleft
Noncleft

FIGURE 3. Graph showing the interaction effect between sex and presence or absence of cleft on the school status score.

FIGURE 4. Graph showing the interaction effect between sex and presence or absence of cleft on the anxiety score.


SCHOOL STATUS
MEAN SCORES
14.0
13.0
12.0
11.0
10.0
Male
Female
Cleft
Noncleft

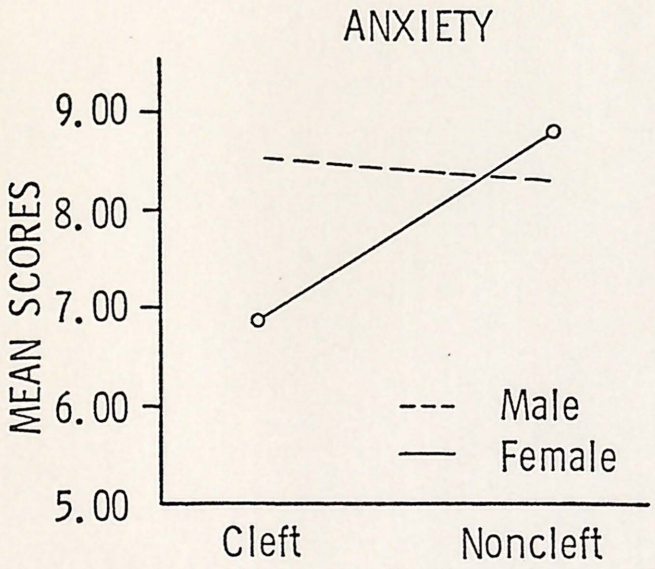
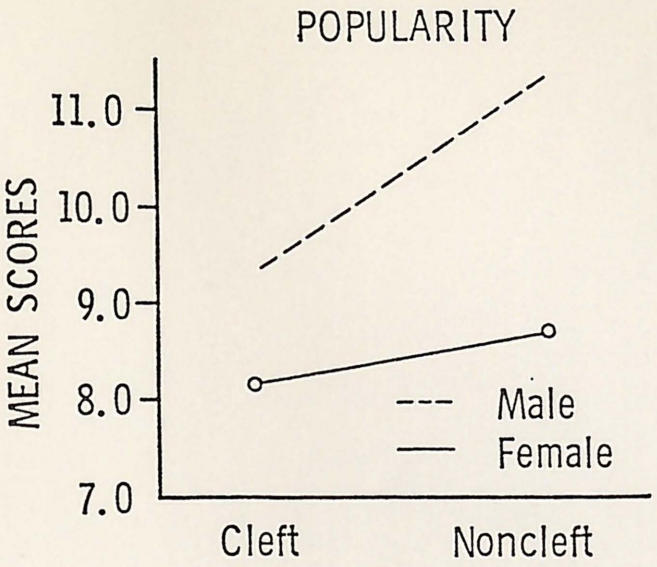

ANXIETY
MEAN SCORES
9.00
8.00
7.00
6.00
5.00
Male
Female
Cleft
Noncleft

FIGURE 5. Graph showing the interaction effect between sex and presence or absence of cleft on the popularity score.

FIGURE 6. Graph showing the interaction effect between sex and presence or absence of cleft on the happiness and satisfaction score.


POPULARITY
MEAN SCORES
11.0
10.0
9.0
8.0
7.0
Male
Female
Cleft
Noncleft

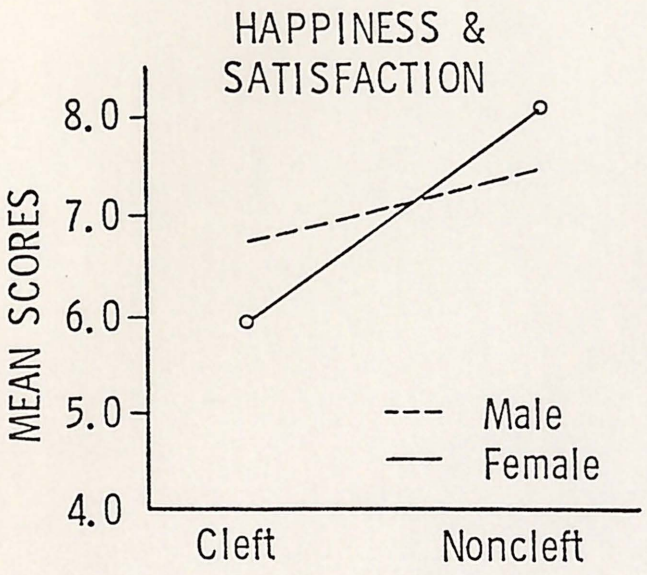

HAPPINESS &
SATISFACTION
MEAN SCORES
8.0
7.0
6.0
5.0
4.0
Male
Female
Cleft
Noncleft

FIGURE 7. Graph showing the interaction effect between sex and presence or absence of cleft on the physical attributes and appearance score.

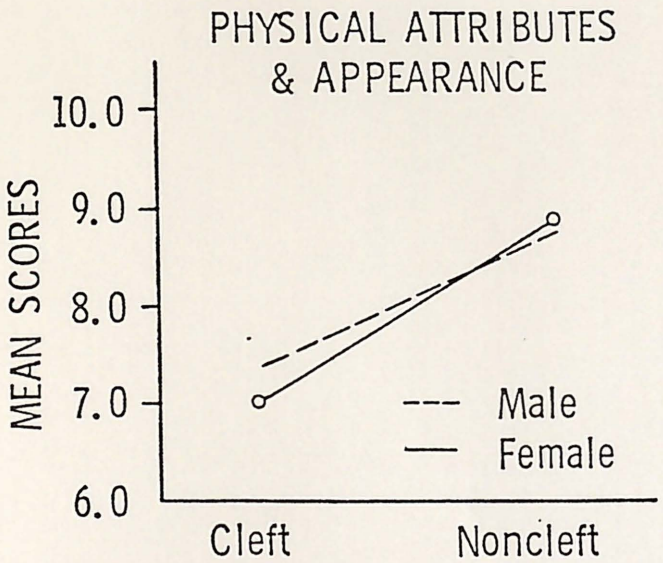
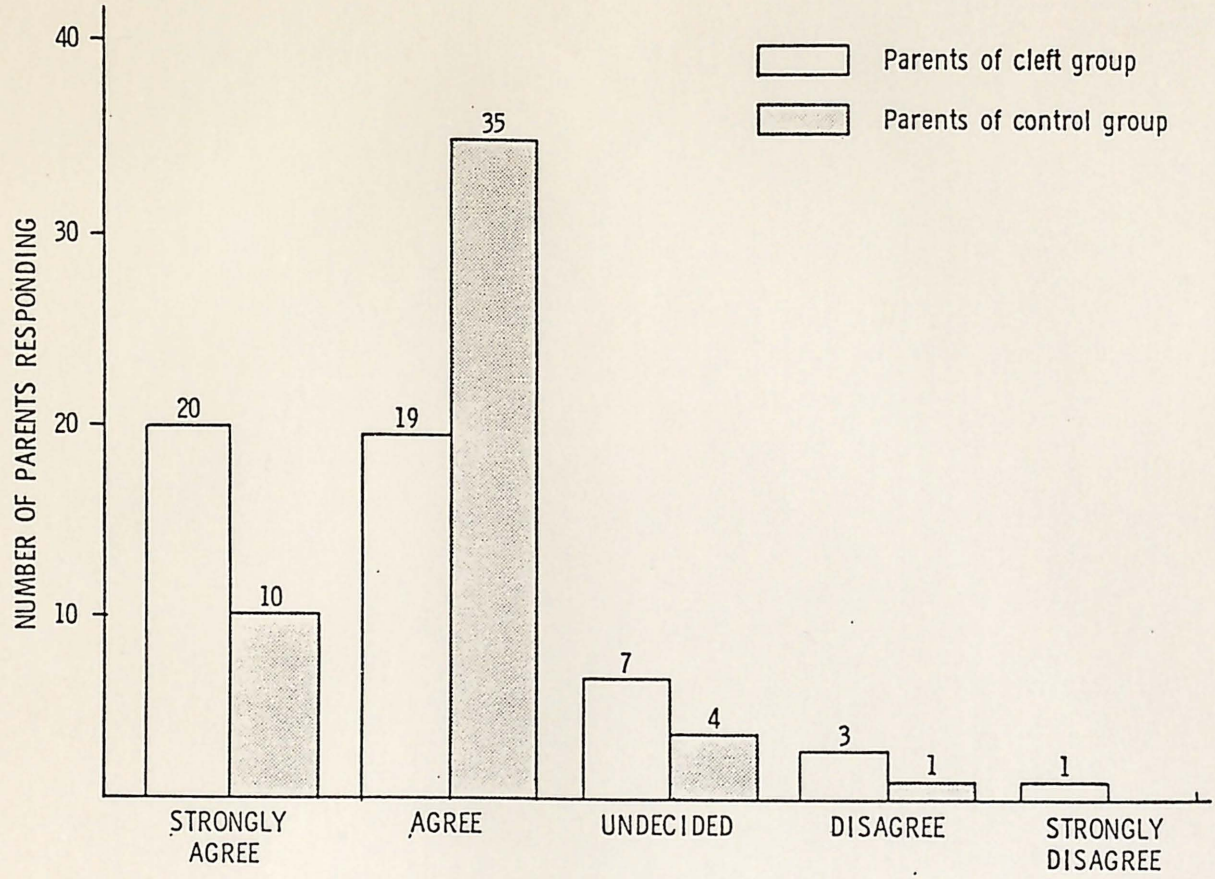

PHYSICAL ATTRIBUTES
& APPEARANCE
MEAN SCORES
10.0
9.0
8.0
7.0
6.0
Male
Female
Cleft
Noncleft

FIGURE 8. Graphic representation of parental response to the statement, "My child has had an essentially normal family life."

FIGURE 9. Graphic representation of parental response to the statement, "My child has a good feeling about himself/herself."


Parents of cleft group
Parents of control group
NUMBER OF PARENTS RESPONDING
40
30
20
10
20
10
19
35
7
4
3
1
1
STRONGLY AGREE
AGREE
UNDECIDED
DISAGREE
STRONGLY DISAGREE

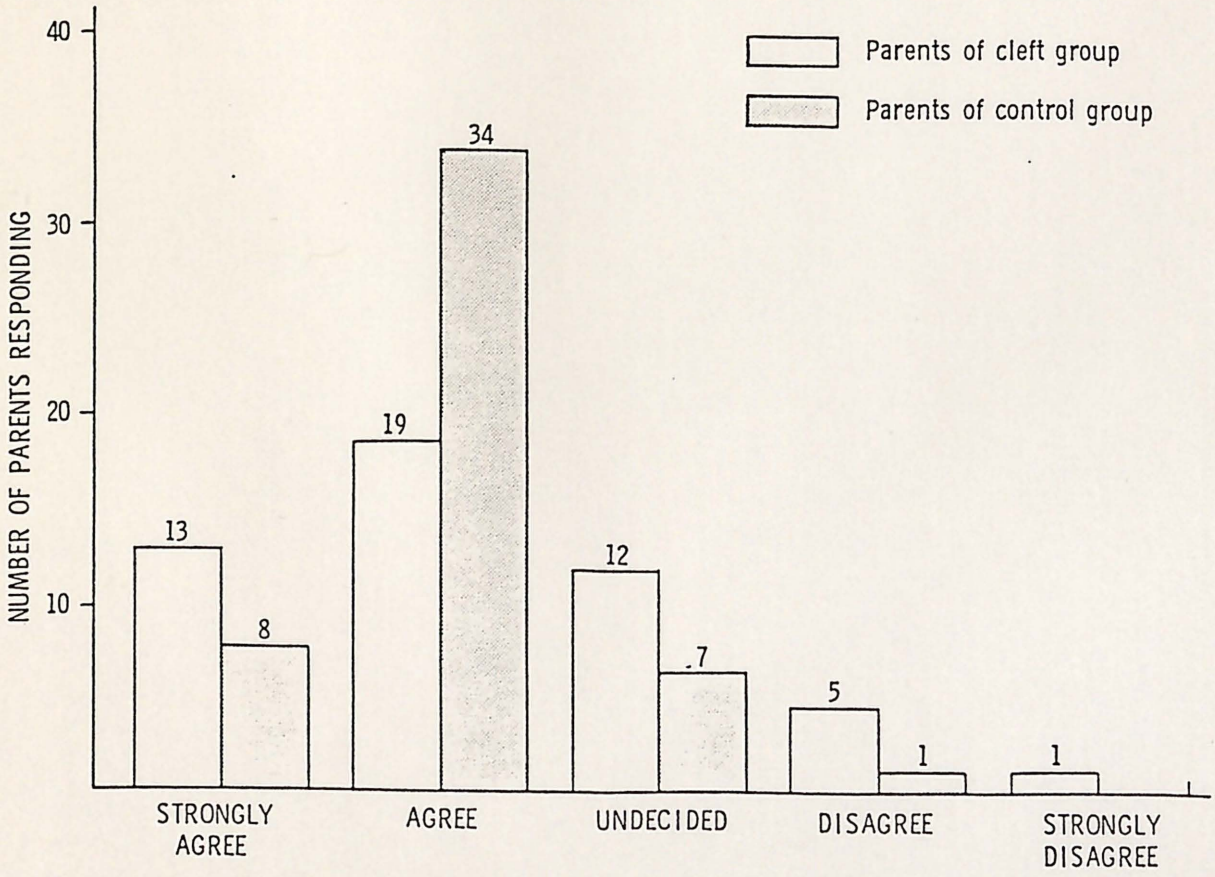
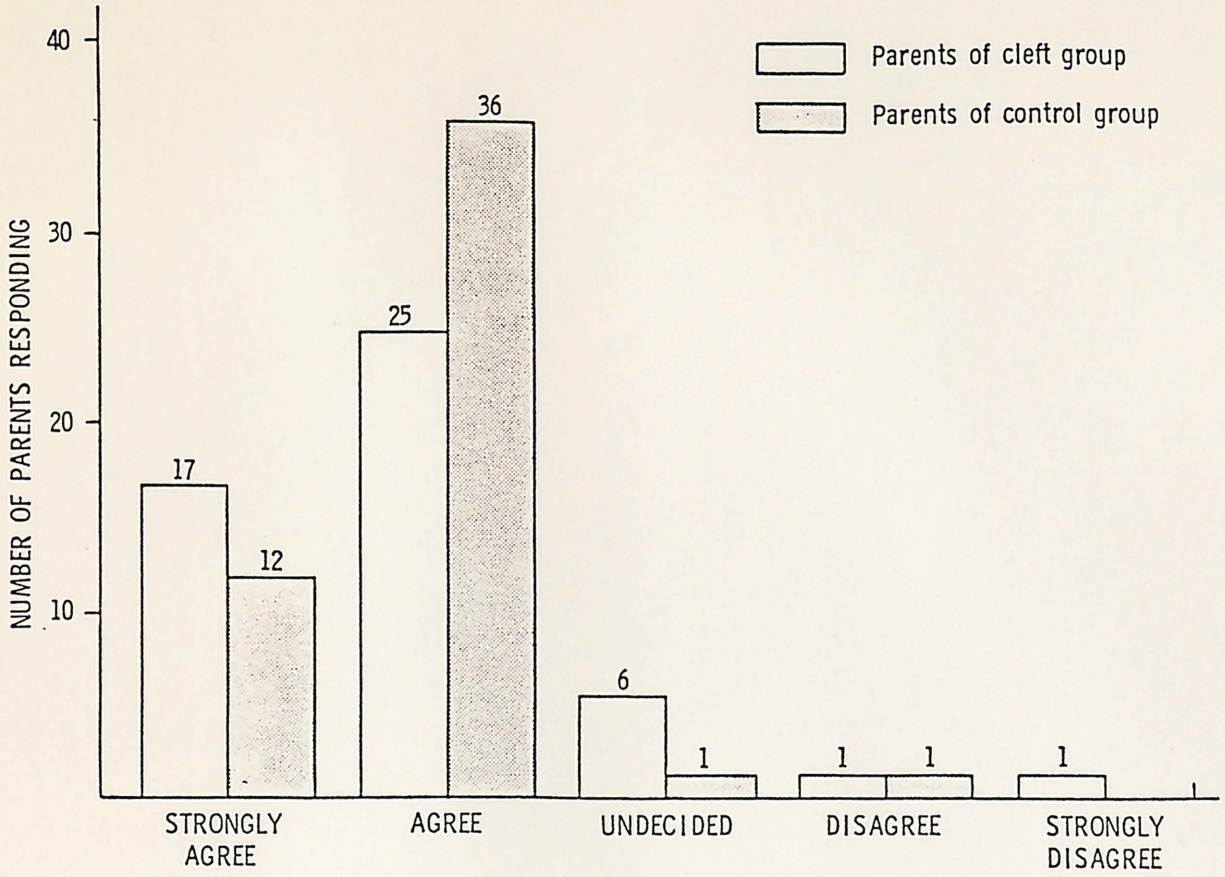

Parents of cleft group
Parents of control group
NUMBER OF PARENTS RESPONDING
40
30
20
10
13
8
19
34
12
7
5
1
1
STRONGLY AGREE
AGREE
UNDECIDED
DISAGREE
STRONGLY DISAGREE

FIGURE 10. Graphic representation of parental response to the statement, "My child gets along well with other children his/her age."

FIGURE 11. Graphic representation of parental response to the statement, "My child would rather play with other children than at home."


Parents of cleft group
Parents of control group
NUMBER OF PARENTS RESPONDING
40
30
20
10
17
12
25
36
6
1
1
1
1
STRONGLY AGREE
AGREE
UNDECIDED
DISAGREE
STRONGLY DISAGREE

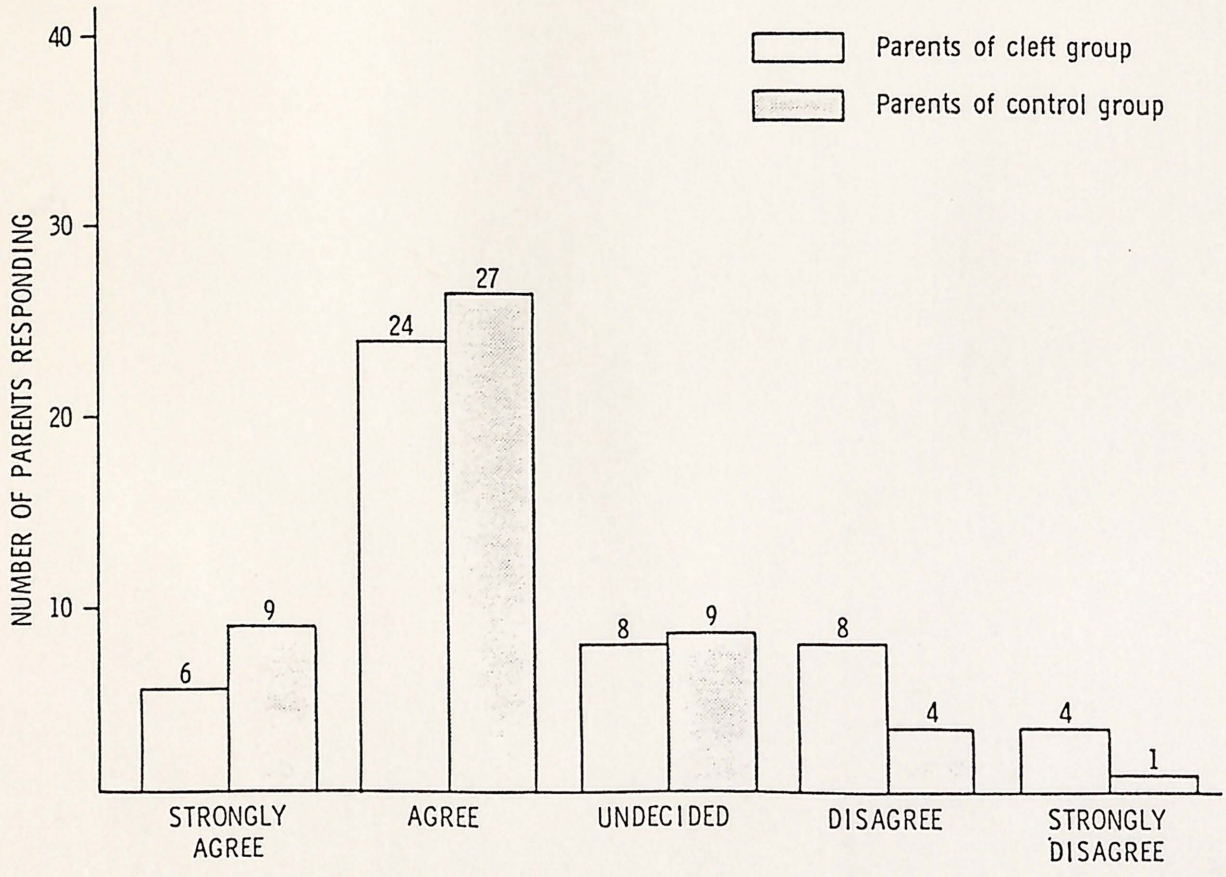
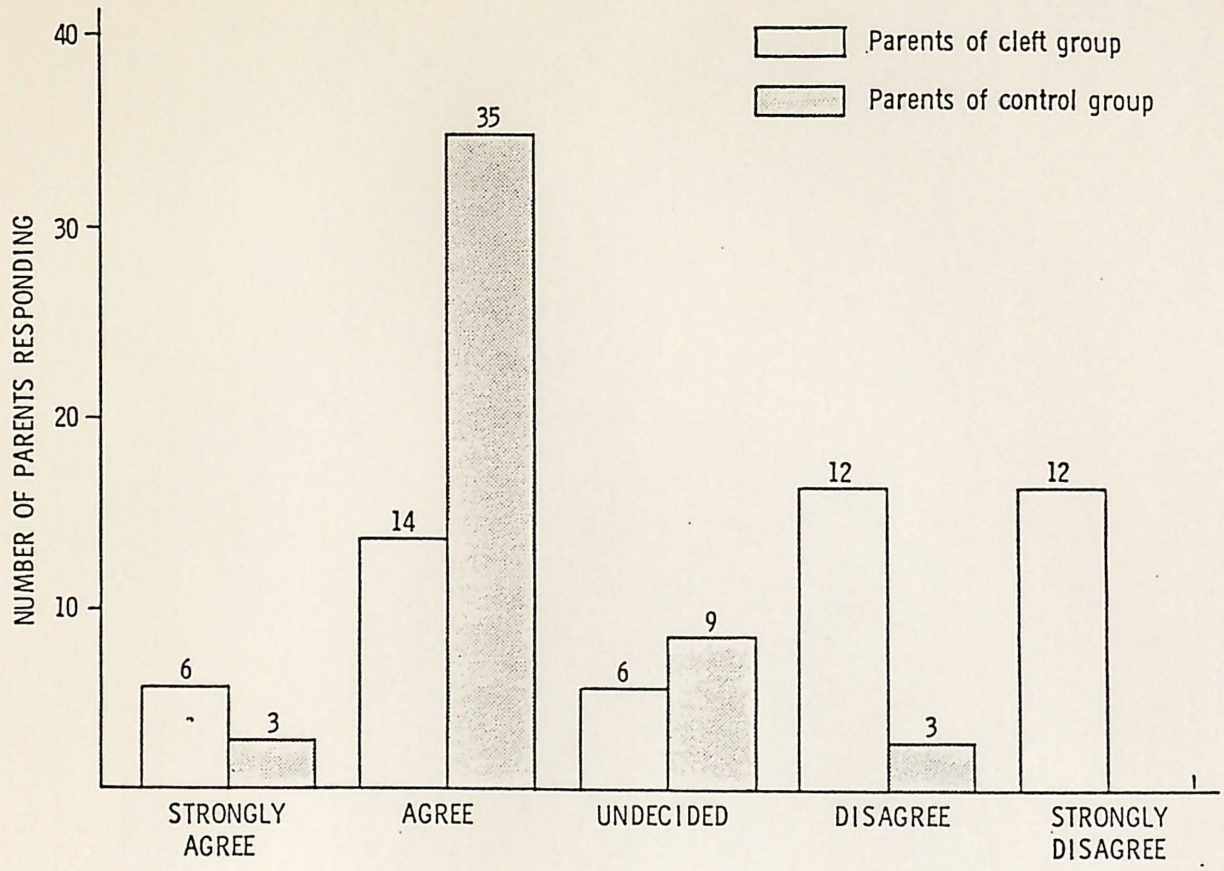
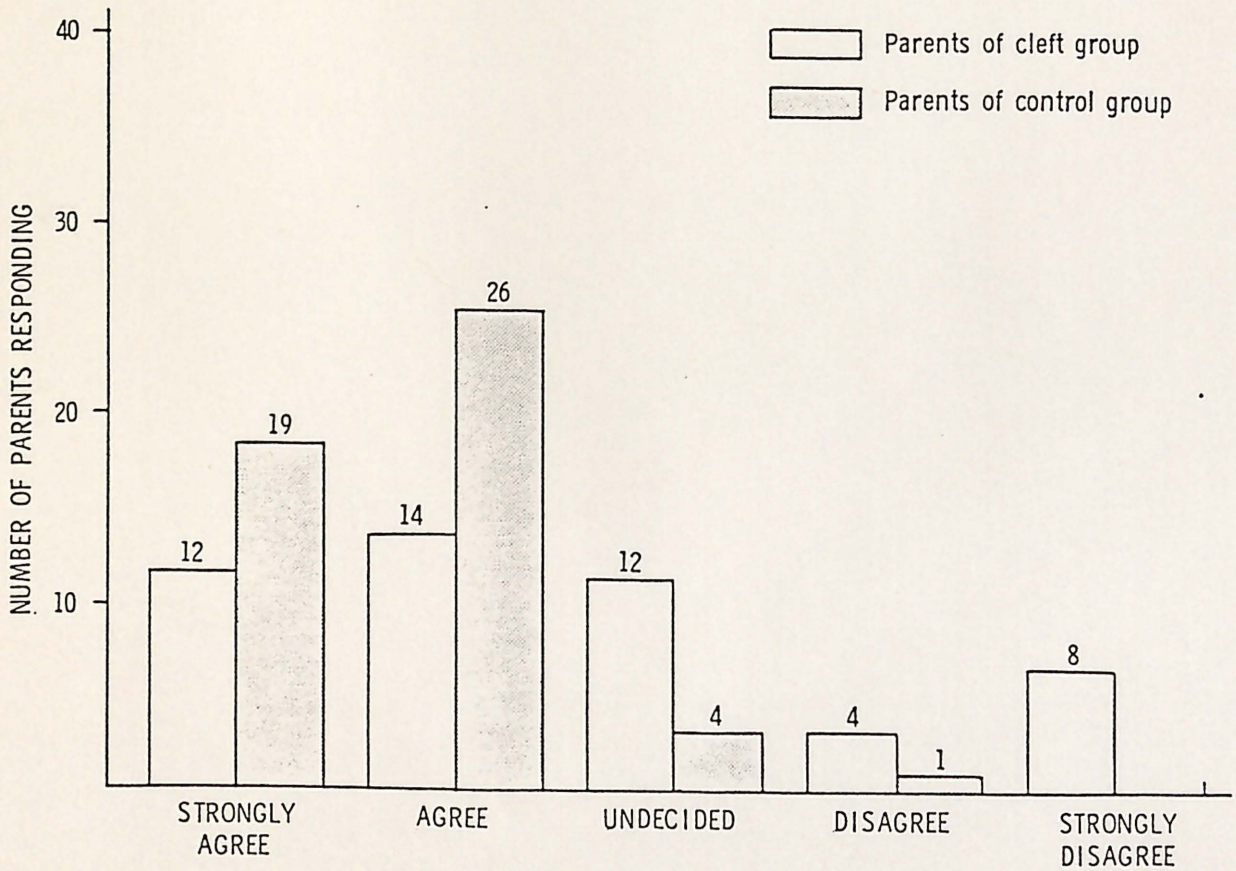

Parents of cleft group
Parents of control group
NUMBER OF PARENTS RESPONDING
40
30
20
10
6
9
24
27
8
9
8
4
4
1
STRONGLY AGREE
AGREE
UNDECIDED
DISAGREE
STRONGLY DISAGREE

FIGURE 12. Graphic representation of parental response to the statement, "My child has seldom been the subject of teasing by other children because of his/her facial appearance." ($p < .05$)

FIGURE 13. Graphic representation of parental response to the statement, "My child's progress in school has not been affected by his/her facial appearance." ($p < .05$)


Parents of cleft group
Parents of control group
NUMBER OF PARENTS RESPONDING
40
30
20
10
6
3
14
35
6
9
12
3
12
1
STRONGLY AGREE
AGREE
UNDECIDED
DISAGREE
STRONGLY DISAGREE


Parents of cleft group
Parents of control group
NUMBER OF PARENTS RESPONDING
40
30
20
10
12
19
14
26
12
4
4
1
8
STRONGLY AGREE
AGREE
UNDECIDED
DISAGREE
STRONGLY DISAGREE

DISCUSSION

Physical attractiveness has been shown to be an important component in the development of an individual's self-concept.[8-13] Facial esthetics, as a component of physical attractiveness, is influential in the formation of initial impressions. Simply looking at one another in a life situation is a basic form of communication.[6,7] Facially attractive individuals are often believed to possess more socially desirable traits than their less attractive counterparts.[16,17]

The range of ages at which the social interactant differentiates the degree of facial attractiveness in peers, which affects impression formation, has been demonstrated to be broad, starting as early as age three.[16-20] The emphasis on physical appearance in our society leads to the expectation that a facial disfigurement, or a significant deviation from the normal physiognomic form, can affect personality development.[12]

The findings of this study, which compared the self-concepts of 50 cleft lip and palate school children with 50 non-cleft children (individually matched by age, sex and race), demonstrated a significant difference ($p < .005$) between the two groups (Table VI, Figure 1). These results differ from those of Kapp,[38] who reported no significant difference in self-concept between 34 cleft lip and/or palate school children individually matched with 34 non-cleft children. Similar results, demonstrating no significant differences in self-concept between cleft lip and/or palate individuals, have been reported by Clifford[35,40] and Sinko.[41] In studies evaluating personality adjustment in children with cleft lip and/or palate,

Sidney and Matthews,[26] Watson,[27] Goodstein,[28] Palmer and Adams,[29] Corah and Corah,[30] Ruess,[31] and Wirls and Plotkin,[32] have reported no significant emotional maladjustment in these children when compared with their non-cleft peers. Of special interest is Billig's[25] observation that in his study of 60 cleft individuals, the three individuals (5%) judged as having unsatisfactory personality adjustment, all exhibited severe facial scarring. In the present study, all cleft lip and palate children had either repaired unilateral or bilateral complete cleft of the lip and palate. Facial scarring was evident in each cleft child. A significant difference between cleft and non-cleft subjects was demonstrated (Table VII, Figure 2).

Further significant differences between cleft and non-cleft subjects were found in five of six cluster scores. These include behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happiness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). Kapp[38] emphasized that, although lowered school achievement was evident for both male and female cleft subjects, the scores of the female cleft individuals reflected the major difference from non-cleft subjects. In this study, a significant difference ($p < .05$) was found in school status between the cleft and non-cleft subject, regardless of sex (Table VIII, Figure 3). Richmond[42] evaluated the parents and teachers of 139 cleft lip and/or palate children and indicated that the teachers believed both male and female clefts were significantly more inhibited in the classroom than their parents observed at home.

In this study, a significant difference ($p < .05$) in behavior was found between cleft lip and palate and non-cleft subjects (Table VIII,

Figure 2). Kapp[38] found no such differences in behavior between cleft lip and/or palate subjects. Schweckendiek and Danzer[47] reported that 20% of the 200 cleft lip and/or palate subjects in their study demonstrated behavior disorders or poor social adaptation to school or family. The 5% who exhibited the most negative behavior possessed the severest facial scarring. Brown[44] and Johnson[45] stated that cleft lip and/or palate children have a sense of inadequacy, and often feel rejected by teachers, peers and other parents.

Significant differences ($p < .05$) in the popularity score between cleft lip and palate and non-cleft subjects were also noted (Table IX, Figure 5). Additionally, a significant effect ($p < .01$) was evident in that cleft males felt less popular than their non-cleft peers. This again differs from Kapp,[38] who found no differences in popularity between cleft lip and/or palate and non-cleft subjects. Spriesterbach's[46] comprehensive investigation of the psychological influences of cleft palate stressed that the cleft child is less confident, less aggressive, and less independent than non-cleft peers.

Significant differences in the happiness and satisfaction score ($p < .001$) were found between cleft lip and palate and non-cleft subjects (Table X, Figure 6). Kapp,[38] in her study, also found that cleft lip and/or palate children reported significantly less happiness and satisfaction than non-cleft children.

In this study, a significant difference ($p < .001$) in the physical attributes and appearance score was reported between cleft lip and palate and non-cleft subjects (Table XI, Figure 7). As a group, Kapp[38] also reported that males and females with cleft lip and/or palate, when

compared with non-cleft children, expressed greater dissatisfaction with personal appearance.

A significant effect was also found on the anxiety score, with cleft females reporting more anxiety ($p < .01$) than non-cleft peers (Table XII, Figure 4). Kapp[38] also reported that cleft lip and/or palate females reported significantly more anxiety than their non-cleft peers.

Among the six statements which parents of cleft lip and palate and non-cleft subjects were asked to respond to, concerning their child's relationship with family and peers, and their progress in school, only two replies demonstrated significant differences. In general, the parents of cleft lip and palate children believed that their child's relationship with family and peers was positive and not unlike those reported by the parents of non-cleft children (Figures 8-11). This corresponds well with the research of Billig,[25] Sidney and Matthews,[26] Palmer and Adams,[29] Corah and Corah,[30] Ruess,[31] and Wirls and Plotkin.[32]

Significant differences between parental responses were found in responses to two of six statements. The first, "My child has seldom been the subject of teasing by other children because of his/her facial appearance," ($p < .05$), is graphically seen in Figure 12. Teasing of cleft lip and/or palate children by their peers has also been reported by Tiza et al.,[43] Brown,[44] Johnson,[45] Spriesterbach,[46] and Schweckendiek and Danzer.[47]

In response to the statement, "My child's progress in school has not been affected by his/her facial appearance," a significant difference ($p < .05$) was found between the parents of cleft lip and palate and non-cleft subjects (Figure 13). Richman[42] compared the perceptions of mother,

father and teacher regarding inhibition in cleft lip and/or palate children within the classroom and home environment. Results indicated that the teachers view cleft males and females as significantly more inhibited in the classroom (which could possibly affect academic performance) than the parents observed at home. Similar results were reported by Tiza et al.,[43] Brown,[44] Johnson,[45] and Schweckendiek and Danzer.[47]

In this study, children with cleft lip and palate demonstrated significant differences in self-concept from non-cleft children. This finding disagrees with the results of most previous investigators and has important implications for members of the dental profession, since these children often require frequent dental visits early in life, enabling the dentist to establish rapport with both patient and parents. If the dentist believes that these patients are experiencing difficulty in relationships with family and peers, or in progress at school, due to the cleft anomaly, they can be referred to mental health professionals for psychological counseling. In addition, the dentist should perform early restorative and prosthetic dental procedures which produce a more normal-appearing dentition. This will further reduce the possibility of setting the child apart from peers.

Of special interest to the author is the question of whether there is a difference in self-concept between children with isolated cleft palate and non-cleft peers. This study is in the preliminary stages at present.

SUMMARY AND CONCLUSIONS

In the first part of this study, 50 cleft lip and palate children were individually matched with 50 non-cleft children on the basis of age, sex and race. All children completed the Piers-Harris Children's Self-Concept Scale. Findings and conclusions included:

1. Cleft lip and palate subjects, regardless of sex, reported significantly lower self-concept than non-cleft subjects ($p < .005$). Although previous research suggests that self-concept in girls may be more affected by cleft lip and/or palate, both sexes appear equally affected in those children with cleft lip and palate.
2. Significant differences between cleft lip and palate and non-cleft subjects were found in five of six cluster scores. These include behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happiness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). It would appear that, when compared to non-cleft peers, cleft lip and palate children, regardless of sex, are affected across a wide range of components which are important in the development of positive self-concept.
3. A significant effect ($p < .01$) was found on the popularity score, suggesting that cleft lip and palate males felt less popular than their non-cleft peers.
4. Cleft lip and palate females expressed significantly more anxiety ($p < .01$) than non-cleft female peers.

Results of the second part of this study, which evaluated how parents of cleft lip and palate and non-cleft children specifically view their child's relationship with family, peers, and their progress in school, may be summarized as follows:

1. Parents of both cleft lip and palate and non-cleft subjects believed that relationships of the child with family, self, and peers were acceptable.
2. Parents of cleft lip and palate children reported that progress in school had been affected by the child's facial appearance.
3. The parents of cleft lip and palate children believed that their children had been the subject of teasing by other children because of their facial appearance.

The dentist can play an important role in improved esthetics by providing early restorative and prosthetic treatment which will give these children a more normal-appearing dentition.

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CURRICULUM VITAE

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November 8, 1950	Born to Paul and Dorothy Jones Louisville, Kentucky
1966 - 1969	Valley High School Valley Station, Kentucky
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June 4, 1976	Married Sherry Faye Clarkson
1977	M.S., Zoology University of Kentucky Lexington, Kentucky
1978	D.M.D. University of Louisville School of Dentistry Louisville, Kentucky
1980	Pedodontic Certification James Whitcomb Riley Hospital for Children and Indiana University School of Dentistry Indianapolis, Indiana
1980 - 1983	Private Practice of Pedodontics Jeffersonville, Indiana
1980 - Present	Instructor, Department of Pedodontics University of Louisville School of Dentistry Louisville, Kentucky
1981 - Present	Assistant Professor of Pedodontics James Whitcomb Riley Hospital for Children Indiana University School of Dentistry Indianapolis, Indiana
1983 - 1984	Postdoctoral Fellow in Cerebral Palsy Department of Pedodontics James Whitcomb Riley Hospital for Children Indianapolis, Indiana

Professional Societies and Offices

American Academy of Pedodontics
American Dental Association
American Society of Dentistry for Children
Indiana Pedodontic Alumni Association
Indiana Society of Dentistry for Children
Indiana Society of Pediatric Dentistry

ABSTRACT

SELF-CONCEPT AND PARENTAL EVALUTION OF PEER RELATIONSHIPS IN CLEFT LIP AND PALATE CHILDREN

by

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This investigation examined the relationship of the self-concept of children with cleft lip and palate to the self-concept of non-cleft children. Fifty cleft lip and palate children between the ages of eight and 18 were individually matched by age, sex and race with 50 non-cleft children. Each child was given the Piers-Harris Children's Self-Concept Scale. Children with clefts, regardless of sex, reported significantly lower global self-concept than non-cleft subjects ($p < .005$). Further significant differences between cleft and non-cleft subjects were found in five of six cluster scores. These included: behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happiness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). A significant effect ($p < .01$) was found on the popularity score, with cleft males feeling less popular than their non-cleft peers. A significant effect was also found on the anxiety score, with cleft females reporting significantly more anxiety ($p < .01$) than their non-cleft peers.

A questionnaire was completed by the parents of the cleft and non-cleft subjects evaluating their child's relationship with family, peers and progress in school. In general, parents of both groups reported positive ratings of their child's social interactions. Parents of cleft subjects reported more negative responses than the parents of non-cleft subjects concerning the teasing the child experienced because of his/her facial appearance ($p < .05$) and the effect that the child's facial appearance had on progress in school ($p < .05$).